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Sov. Defense Spending: Trends in Ruble Expenditures

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Intelligence Report

Soviet Defense Spending: Trends in Ruble Expenditures

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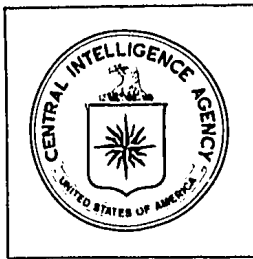
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Soviet Defense Spending: Trends in Ruble Expenditures

Key Findings

Since 1960 the Soviets have added more than one million men to their armed forces, deployed more than 2,000 intercontinental range missiles, constructed a massive nationwide air defense system, and conducted an ambitious space program. These gains have been costly—in 1974 Soviet defense and space programs would have required more than 100 billion dollars to reproduce in the US.

In ruble terms, Soviet expenditures for military and space purposes grew steadily over the period, rising at an average annual rate of about 3 percent in constant prices to about 28 billion rubles in 1974. The upward path of Soviet defense spending has been marked by three well-defined cycles. These result from the large procurement costs incurred in the deployment phases of succeeding generations of strategic systems. The cycles appear to have been independent of economic conditions or short-term political considerations.

The expansionary phase of the latest cycle began in 1973 as the USSR undertook a new round of procurement of ICBMs. The rates of growth in military spending which have accompanied this cycle are higher than for any comparable period in the past. Nevertheless, the general pattern during the current phase is consistent with past cycles, and spending will probably level off at a new higher plateau in 1976-1977 as the new wave of deployment of ICBMs approaches completion.

An examination of the trends in spending for some key components provides an indication of the principal defense planning issues facing the USSR:

- Spending for the SS-11 Mod 3, the four new ICBMs being developed for the Strategic Rocket Forces (SRF), and SSBN systems for the Navy is providing the main impetus to the current upward surge in total defense outlays. If the Soviets develop a second generation of MIRV systems for these new missiles, outlays for strategic systems will remain high throughout the remainder of the seventies.
- The current overall procurement cycle is more broadly based than its predecessors of the sixties. Spending for the Air Forces—especially Frontal Aviation—and for the Ground Forces is growing as the USSR strives to upgrade its conventional forces. Though not presently increasing, spending for general purpose naval forces remains at a high level.
- The Air Defense Forces (PVO Strany) are not sharing in the current growth of the Soviet military. The large PVO deployment programs undertaken in the sixties have been completed and no new ones are under way.
- Spending for military RDT&E is taking a rising share of the total acquisition cost of military systems—development costs plus procurement costs—reflecting the increased complexity of Soviet weapons. Estimated RDT&E costs over the 1970-1974 period were 75 percent as large as investment in new systems as opposed to only about 40 percent as large in 1960-1964. This trend suggests that military R&D costs will continue to rise.

The Soviet leaders, now more sensitive to consumer demands than in the past, have acknowledged the high costs of their defense effort. They are aware of the heavy impact of military requirements on the technological resources needed to modernize the Soviet economy. Nonetheless, the leaders believe that the economy is generally healthy, and they appear confident that it can sustain the present magnitude and pace of the defense effort.

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
March 1975

INTELLIGENCE REPORT

Soviet Defense Spending:
Trends in Ruble Expenditures

Organization of the Study

This study analyzes trends in Soviet defense spending as they might be seen by Soviet leaders. For this reason all of the data are presented in rubles.* The study is divided into five major sections:

- The Framework for Analysis describes the system of accounts that is employed in the USSR to organize expenditures for defense programs into categories.
- Soviet Defense Outlays presents a discussion of overall trends in Soviet defense spending in terms of major categories of expenditures. Included in the treatment of total Soviet defense spending are those elements of space expenditures that in the US would be funded by the National Aeronautics and Space Administration.
- View From the Ministry of Defense covers the outlays by each of the branches of service, facilitating an understanding of the institutional aspects of Soviet defense spending.
- Resource Implications of the Soviet Defense Effort deals with the relationship between

* For a detailed treatment of the estimated dollar costs of Soviet defense programs see *Soviet Spending for Defense: A Dollar Cost Comparison of Soviet and US Defense Activity*, SR IR 74-7, December 1974 (S).

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defense activity and the economy. This section includes a discussion of the magnitude of the overall defense effort and the criticality of various resources required to achieve defense goals. It also examines ways in which the Soviet leaders might view the burden of defense spending on the economy.

- Outlook discusses factors which are likely to influence the direction of total Soviet defense spending over the next few years. Defense spending by branch of service is also projected several years into the future.

This study supersedes *Soviet Spending for Defense: An Annual Review, Volume I. Trends in Ruble Expenditures*, SR IR 73-11, August 1973.

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Soviet Defense Outlays*

Expenditure Trends

Soviet expenditures for military and space purposes have grown steadily but irregularly since 1960, registering an increase in every year except 1972. On an average these expenditures have grown at about 3 percent annually. Spending during 1974 amounted to about 27.5 billion rubles--about 50 percent more than in 1960. Expenditures grew little between 1970 and 1972, but sizable increases took place in 1973 and 1974, and increases nearly as large are projected for the next several years.

There have been three identifiable cycles in Soviet defense spending since 1960: 1962 marked the peak of the first cycle; the second cycle extended from 1963 to 1972; and 1973-1974 witnessed the expansion phase of the third cycle. Spending for military forces--total outlays less space and military R&D--accounts for more than 70 percent of estimated total defense spending and has largely determined the growth pattern exhibited in total defense outlays.

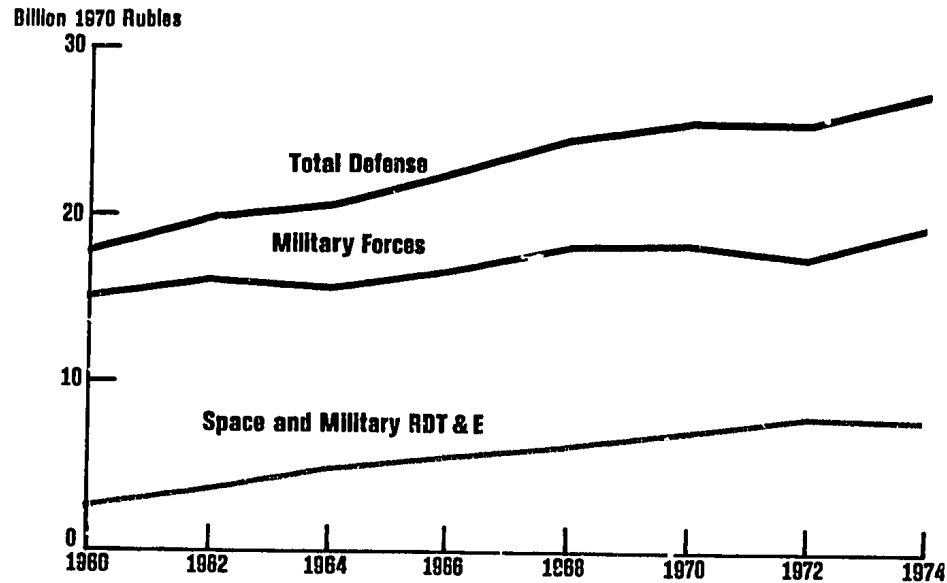
Combined spending for civil space and military RDT&E grew rapidly throughout most of the sixties as the Soviets sought to develop a wide range of military and space systems. Annual percentage growth rates were extremely high in the early sixties because absolute expenditures were quite small in those years. Since 1970 growth has slowed as space RDT&E spending has leveled off and as ICBM systems under development have approached operational status. While combined space and military RDT&E spending increased every year between 1961 and 1973, annual growth rates varied considerably, reflecting in some periods a roughly inverse relationship to growth rates in forces spending.

* Expenditures for civil space programs are included in all calculations in this report unless specifically stated otherwise.

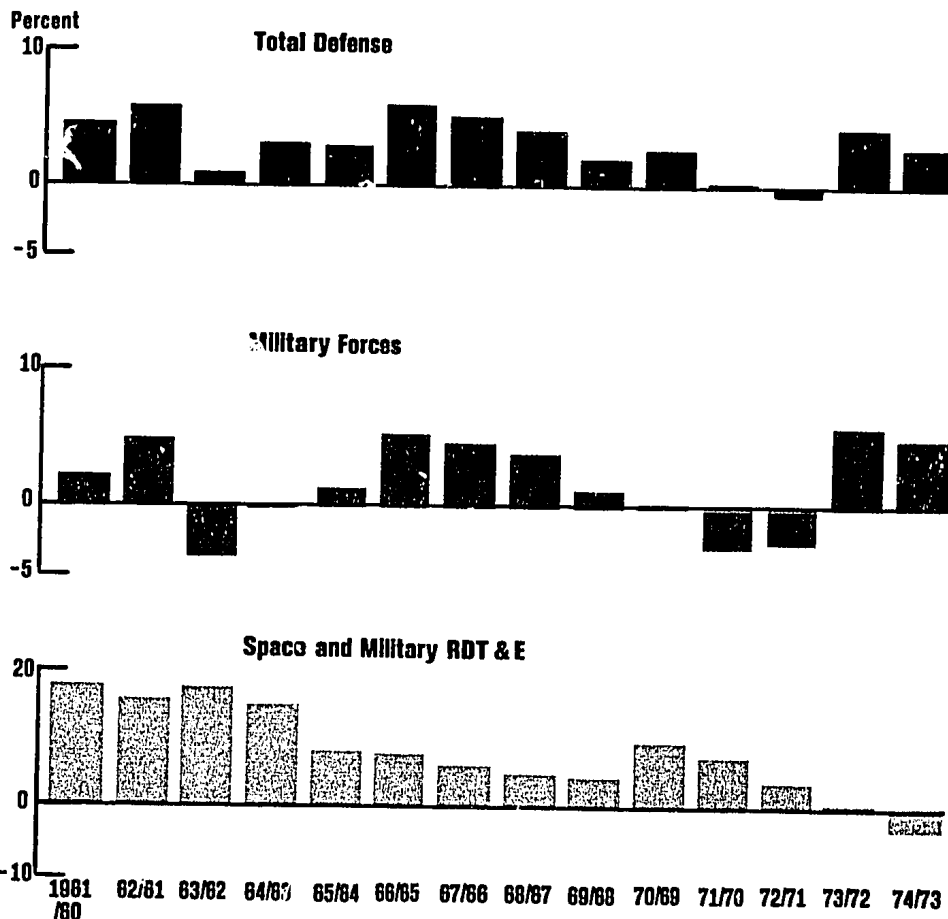
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Estimated Soviet Expenditures for Defense



Annual Rates of Growth



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Resource Analysis

As noted above, three resource categories of defense expenditures can be identified and estimated: operating, investment and "science." (See chart at right.)

Since 1960, operating expenditures have, with little variation, claimed slightly less than one-third of total defense outlays. Investment expenditures have declined from about 50 percent of the total in 1960 to slightly over 40 percent in 1974. The effect of periodic dips in procurement of new weapons has tended to be offset in total investment expenditures by steadily rising outlays for spare parts because of the increasing stock of Soviet weapons. "Science" expenditures associated with the defense effort rose from 15 percent to more than 30 percent of the total between 1960 and 1972. Since 1972, however, the share of defense outlays spent on civil space and military R&D has slipped slightly.

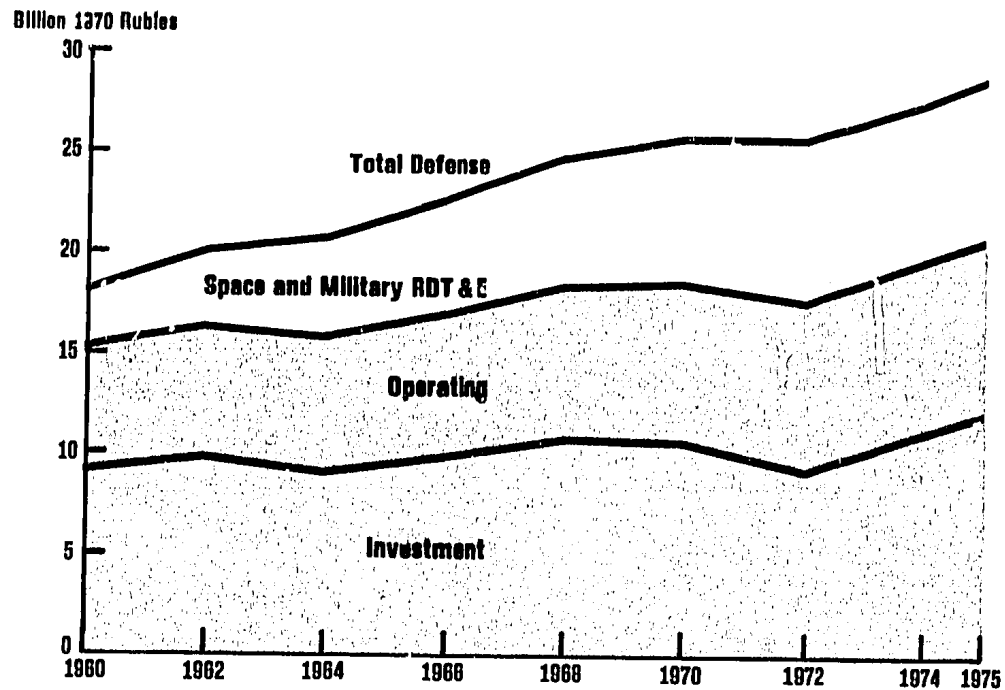
Operating Expenditures

Most operating expenditures are directly related to military manpower strengths and activity levels. In the absence of large-scale troop mobilizations or reductions, they tend to be more stable than investment or "science" expenditures.

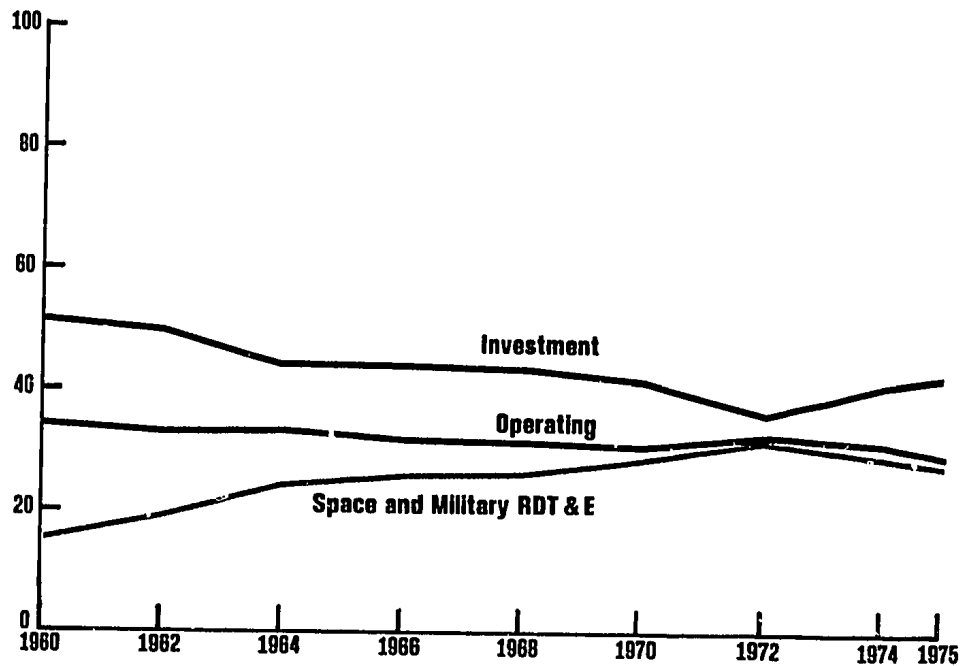
Operating expenditures grew slowly but steadily from 6.1 billion rubles in 1960 to 8.6 billion rubles in 1974--a result of continual increases in manpower levels. Over the last 14 years the active armed forces have increased by about 1.1 million men, bringing the current total to slightly over 4 million. Of this number, about 300,000 were added after 1970. The table (page 14) gives the estimated manpower levels since 1960 for each of the five service branches and for Command and Support elements.

The greatest increase--more than 500,000 men--occurred in the Ground Forces. In the late sixties Ground Forces manpower grew rapidly as new divisions were formed for service along the Sino-Soviet border.

Estimated Soviet Defense Expenditures by Resource Category



Percent of Total Defense Spending



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Soviet Military Manpower
(thousands of men)

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1974</u>
Ground Forces	1,360	1,330	1,660	1,880
Navy	430	420	450	470
Air Defense Forces	340	420	470	460
Strategic Rocket Forces	50	230	270	255
Air Forces	310	230	310	345
Command and Support	<u>460</u>	<u>520</u>	<u>630</u>	<u>640</u>
Total on active duty	2,950	3,200	3,790	4,050

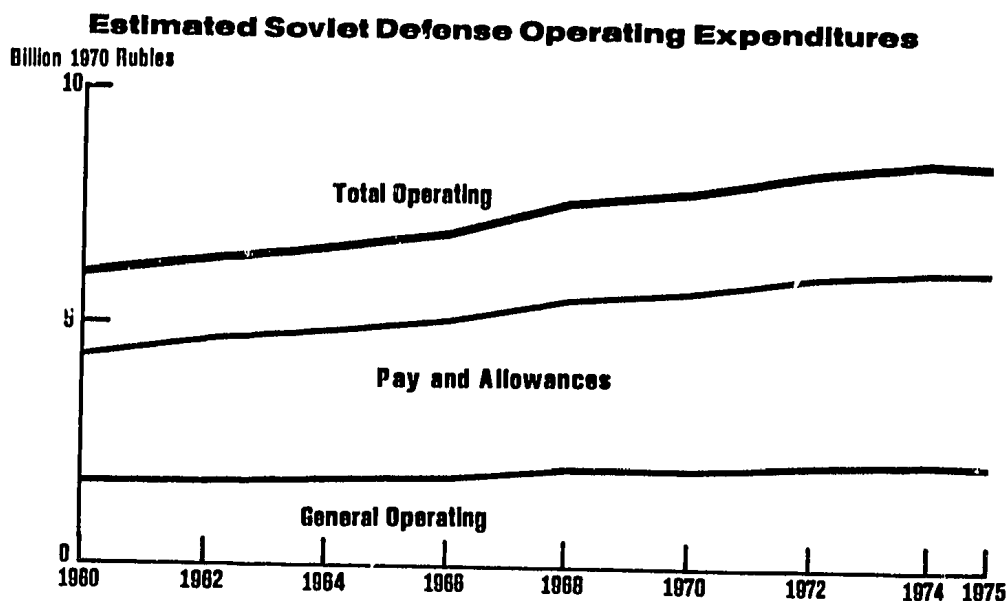
The creation of new divisions began to taper off by about 1970, but overall Ground Forces manpower continued to increase as forces in the Asian border area were filled out.

The Strategic Rocket Forces expanded rapidly during the sixties, adding more than 200,000 men (more than a fourfold increase), but since 1970 there has been a slight decline in SRF manpower as the number of missiles deployed in soft sites, which require large numbers of men, has been reduced.

Air Forces manpower declined in the early sixties but has grown by 20 percent since 1965. Air Defense manpower grew rapidly in the early sixties but dropped slightly in the last five years. The number of active-duty personnel in the Navy has grown only about 10 percent since 1960. Somewhat less than 200,000 men have been added to Command and Support since 1960--an increase of about 40 percent.

These increments in military personnel, together with an estimated parallel growth in civilian personnel employed by the Ministry of Defense, resulted in an average annual growth of about 2.6 percent in the total wage bill (pay and allowances plus civilian wages). Since 1970 the wage bill has accounted for almost one-quarter of total defense spending and one-third of spending for the forces.

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Note: Pay and Allowances include active-duty military pay and allowances and civilian wages. General Operating includes rations, POL consumption, medical care, and transportation.

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The major items in the category of general operating expenditures are rations and POL. Rations account for about two-thirds of general operating expenditures and increased proportionately to the growth in military manpower, as did other personnel-related costs, such as medical costs. POL consumption consistently accounted for about 20 percent of total operating outlays.

Investment Expenditures

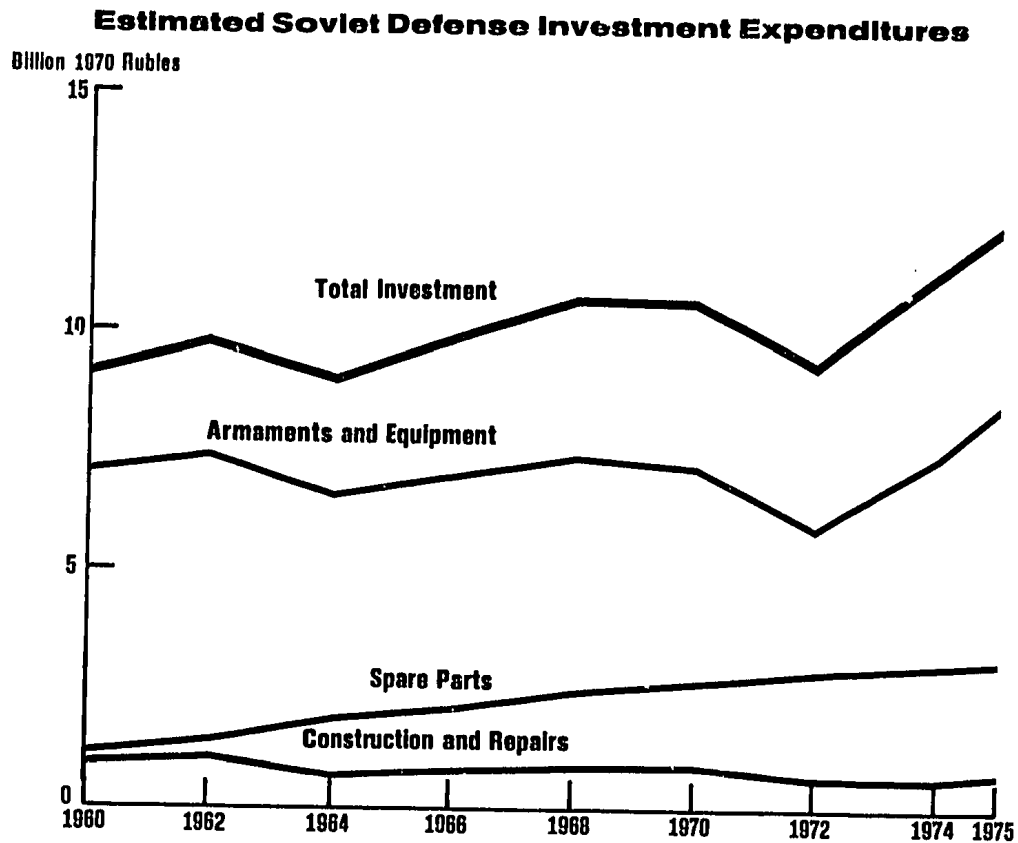
Outlays for investment--the purchase of weapons, equipment, and spare parts, and the construction and repair of facilities--have been much more variable than operating costs. Swings in investment spending have produced the cyclical pattern that is evident in the history of total defense spending. The procurement of new weapons--principally strategic systems for the Strategic Rocket Forces, the Air Defense Forces, and strategic components of the Air Forces and the Navy--accounts for three such cycles in investment spending since 1960. In the early sixties the Soviets procured a variety of offensive and defensive missiles and aircraft. During the second cycle, in the late sixties, strategic procurement concentrated mainly on offensive missiles, including ballistic missile submarine programs, and defensive missiles. In the present cycle, purchases of strategic weapons are comprised largely of offensive missiles, both submarine-based and land-based.

Procurement outlays for new nonstrategic systems remained relatively constant throughout the sixties, but they have been growing steadily since 1970 as the Soviets have begun procuring more tactical aircraft and more complex weapons for the Ground Forces.

Annual outlays for spare parts--the principal cost item in maintaining forces--rose sharply between 1960 and 1970, from 1.2 billion rubles to 2.7 billion rubles, registering an average growth of 8.5 percent per year. The growth in outlays for spare parts was associated with the acquisition of large numbers of

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increasingly complex weapons and equipment--in particular, offensive and defensive missile systems and electronic gear. Since 1970, expenditures for spare parts have increased at a much slower rate but still have exceeded the growth of total investment expenditures by a significant margin.

Expenditures for construction of facilities tend to fluctuate widely, but account for less than 10 percent of total spending. Construction outlays were about 8 percent of total defense investment in the early sixties, and since that period neither the absolute level nor the relative share has been as high. Construction of missile emplacements and personnel facilities have accounted for about 40 percent each of investment in facilities. The remainder was spread among airfields, naval facilities, and other types of installations. The maintenance and repair of Soviet defense facilities have required relatively large expenditures--about half those for new construction.

Cumulative expenditures for the procurement of principal types of equipment and for construction of facilities--but not including spare parts--during the 1960-1974 period are estimated as follows:

	Billions of rubles	Percent of total
Missiles*	38.6	35
Aircraft*	28.1	25
Naval vessels	11.3	10
Radars and associated equipment	5.4	5
Construction of facilities	7.7	7
Ammunition and land arms	6.7	6
Other**	13.6	12
	<u>111.4</u>	<u>100</u>

* Includes nuclear warheads and bombs.

** Military space systems, general purpose vehicles, and organizational equipment.

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* Includes procurement of new systems and construction of facilities. Does not include purchase of spare parts or facilities repair.

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"Science" Expenditures

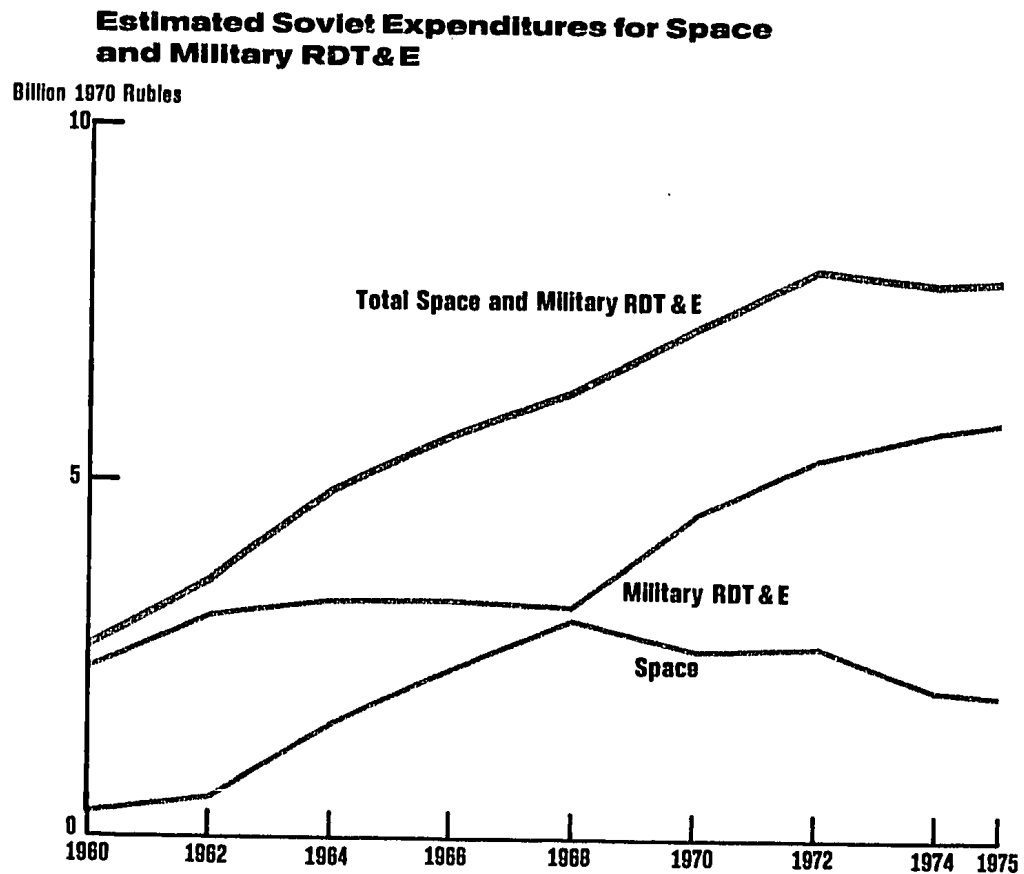
Most Soviet military RDT&E and space activities are believed to be funded primarily through the "science" allocation--rather than the defense allocation--of the All-Union portion of the State Budget. Spending for space and military RDT&E increased at an average annual rate of more than 10 percent during the sixties. Since 1970, however, spending for military RDT&E has grown a little less rapidly while space spending has leveled off. The patterns of growth of military RDT&E and civil space have tended to run counter to each other since 1963. The similarity of the resources required by the two activities, together with the generally inverse relationship of their spending patterns, suggests that most new R&D resources were devoted to space during the 1965-1968 period, but that since 1969 military programs have had top priority.

Space Expenditures. Space expenditures rose sharply from about 300 million rubles in the early sixties to some 3 billion rubles in 1968. After holding steady at about 2.7 billion rubles between 1969 and 1972, outlays have declined to about 2.1 billion rubles over the last two years.

The driving force behind the substantial growth in space expenditures in the sixties was the Soviet manned lunar and space station effort and the development of the associated launch vehicles. A conspicuous lack of progress in the Soviet manned space program has curtailed spending for this effort. Another factor in the decline of civil space spending is the completion of development of the SL-12 launch vehicle.

Military RDT&E Expenditures. Estimated spending for military RDT&E increased rapidly during the early sixties with the development of the SS-9 and SS-11 missiles, the Y class submarine, and the SA-5 SAM. Spending leveled off during the mid-sixties upon completion of these development programs and during the ascendancy of the space program, but jumped at the end of the sixties when the Soviets initiated

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development of four new ICBM systems. Between 1968 and 1972, the share of military RDT&E in total defense spending rose from 13 percent to 21 percent.

Comparison of Military RDT&E and Investment

Comparison of expenditures for military RDT&E and for procurement of new weapon systems (total investment less spare parts and facilities repair) shows the increasing proportion of overall costs required for research and development. While procurement outlays have varied from year to year, they have not demonstrated an increasing trend. For example, for each of the five-year periods of 1960-1964, 1965-1969, and 1970-1974 the Soviets invested between 35 and 38 billion rubles in military armaments, equipment, and facilities. At the same time, military RDT&E costs rose from 14.8 billion rubles in 1960-1964 to 26.3 billion rubles in 1970-1974. During the first five-year period RDT&E costs were about 40 percent as large as investment in new systems; in the last period they were almost 75 percent. Thus, the share of RDT&E outlays in the total cost (development, acquisition, and installation) of weapon systems increased greatly.

Military R&D and Investment in Strategic Systems

An inverse relationship, similar to that between military RDT&E and civil space expenditures, emerges in a comparison of expenditure patterns for military RDT&E with those for procurement of strategic weapon systems. Military RDT&E and "strategic" investment also compete for some of the same resources. Reinforcing this inverse relationship are programing aspects of complex strategic weapon systems--that is, the time lag between development and deployment.

The slackening in spending for investment in the early seventies resulted from the fact that the Soviets were between major strategic programs. The SS-9, SS-11, Y class, and SA-5 programs, which had boosted investment spending to record levels in the late sixties, were nearing completion, and a new generation was not yet available. The surge in military RDT&E expenditures beginning in 1969 coincided with

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the early phases of development on at least four new ICBMs and the D class submarine. As development of these new systems nears completion, investment spending has grown rapidly and military RDT&E spending appears to be leveling off.

View From the Ministry of Defense

The armed forces of the USSR are organized into five major branches--Ground Forces, Navy, Air Defense Forces, Strategic Rocket Forces, and Air Forces. The activities of the individual branches of service are coordinated by the General Staff, which also plays a crucial role in financial and force level planning, and in weapons design and development.

The patterns of defense spending by branch of service presented in this section reflect essential priorities in the Soviet armed forces somewhat sharpened or dulled by the measure of success achieved by the individual branches in the competition for resources. The methodologies used provide estimates of investment and operating outlays for deployed forces by branch of service. They do not include the costs of command and support functions nor do they provide estimates of RDT&E; both of these categories of expenditures are included in the aggregate military estimates, but they cannot be broken down by branch. Even if command and support could be disaggregated it is unlikely that the pattern of spending of the services would be altered significantly.

Most expenditures for military RDT&E programs are allocated through the science budget rather than the Ministry of Defense Estimate. Some general observations about the likely effect of military RDT&E spending on the structure of spending for forces are presented at the end of this section. Although the analysis excludes outlays for RDT&E and for command and support, it does encompass the most important expenditures for which the Ministry of Defense and its components are accountable.

Spending for Forces

Total spending for military forces followed a generally rising pattern in the 1960-1974 period--increasing from about 15.4 billion rubles in 1960 to about 19.7 billion in 1974. The upward trend has been marked, however, by three distinct cycles which have peaked about every seven years. Spending for the first cycle peaked in 1962. Following several years of modest decline, spending rose steadily until 1969. Spending decreased in 1971 and 1972 and then began to surge upward. Spending during the present cycle is expected to peak about 1976.

Ground Forces

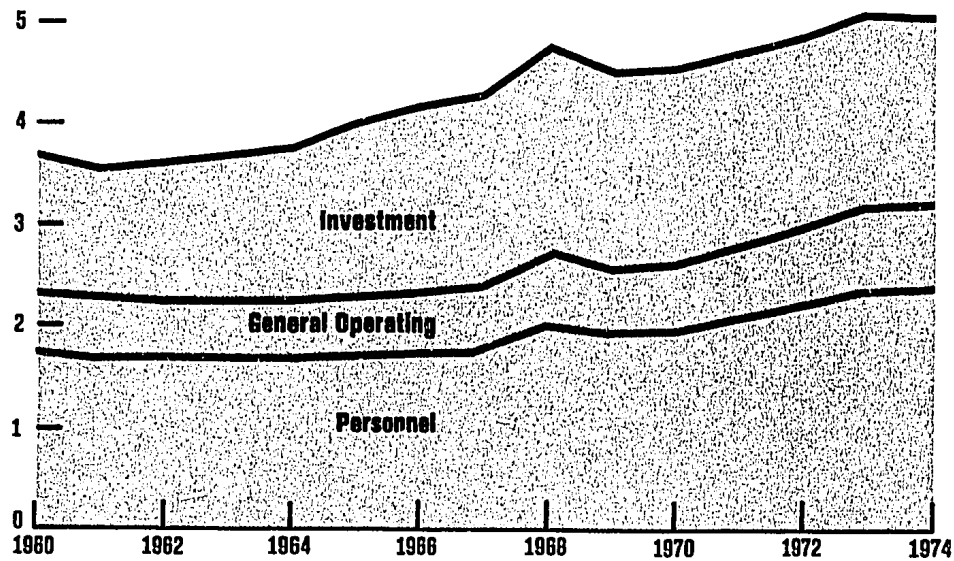
Expenditures for Soviet Ground Forces, including the Border Guards, grew from 3.7 billion rubles in 1960 to 5.1 billion in 1974--an increase of about 40 percent. (See chart at right.)

After a period of little change in the early sixties, spending rose steadily in the second half of the decade in connection with the buildup of forces on the Chinese border. That buildup was largely completed by 1970. The spending "hump" of 1968 resulted from the reserve call-up for the invasion of Czechoslovakia in that year. Since 1970, expenditures have continued to rise as a result of increases in divisional equipment and manpower levels and force modernization efforts.

Total spending for the Ground Forces does not vary from year to year as much as that for the other branches. One reason is the unusually large share of the total devoted to military and civilian pay and allowances. Since 1960 such costs have accounted for about 45 percent of the total Ground Forces budget. A second reason is the long, steady procurement programs for principal weapons and equipment. Procurement of major land armaments and other ground force weapons--for example, the T-55 and T-62 tanks--has spanned a period of 10 or more years. Even smaller and less expensive items such as artillery, armored personnel carriers, and small arms have taken long

Estimated Soviet Expenditures for the Ground Forces By Resource Category

Billion 1970 Rubles
6 —



By Procurement Category

Billion 1970 Rubles
3 —



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periods of time for deployment to all units because of the large quantities involved.

Spending for procurement of new weapons and equipment rose sharply between 1960 and 1968, but declined steadily since then. During the early sixties, expenditures for tactical missiles rose rapidly to a peak of almost 600 million rubles and accounted for about 45 percent of Ground Forces procurement. By 1974, expenditures on missiles had declined to about 200 million rubles. The steady decrease in missile expenditures since 1965 reflects the completion of the tactical missile deployment and modernization program as well as the shift toward greater reliance on aircraft for tactical nuclear delivery.

During the past six or seven years the Soviets have introduced a number of new systems into the Ground Forces. Some of these--the BMP, the ZSU-23/4 antiaircraft gun, and self-propelled artillery--are far more complex and expensive than earlier systems. But the costs for these weapons do not bulk large in overall Ground Forces procurement. The outlays for these new systems are more than offset by the decline in expenditures for surface-to-surface missiles which occurred during the period. The decline is the principal cause of a 25 percent decrease in Ground Forces procurement expenditures between 1968 and 1974. Tactical aircraft, which absorbed some of the functions of missiles, are the property of the Soviet Air Forces. Outlays for land armaments and other Ground Forces equipment remained at about the same level, although a surge in procurement of land armaments is projected for the next several years.

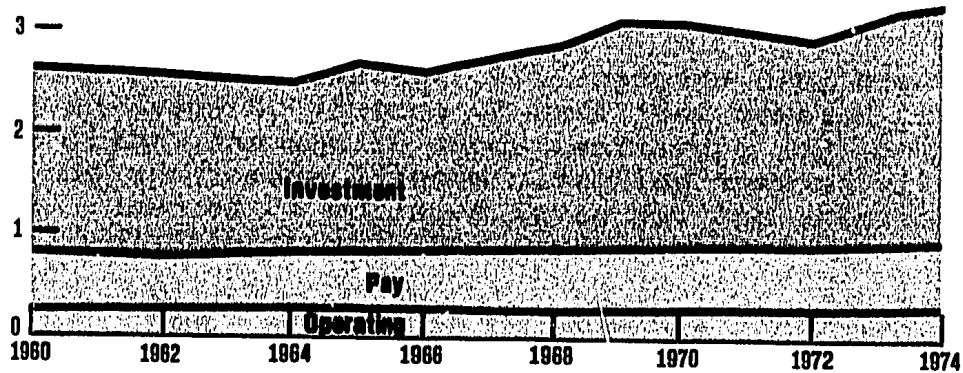
The Navy

Expenditures of the Soviet Navy are estimated to have increased by more than 25 percent during the period under consideration--from 2.6 billion rubles in 1960 to 3.3 billion rubles in 1974. After a period of little change during the early sixties, the Navy expenditure pattern has been one of general growth. Most of the increase since the mid-sixties is attri-

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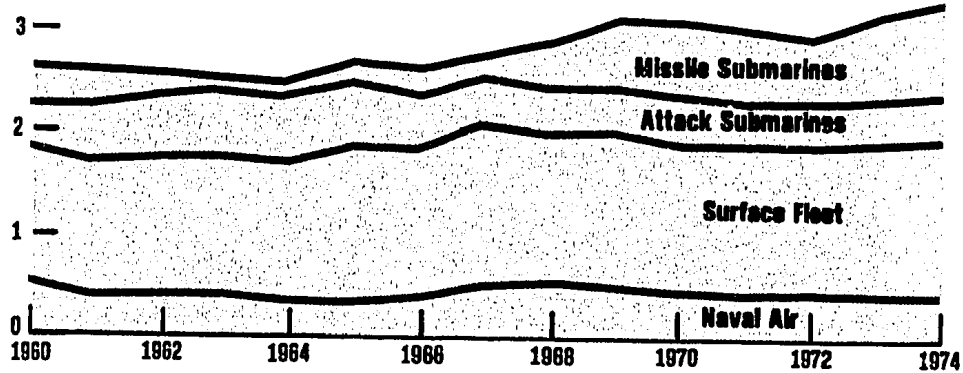
Estimated Soviet Expenditures for the Navy By Resource Category

Billion 1970 Rubles
4 —



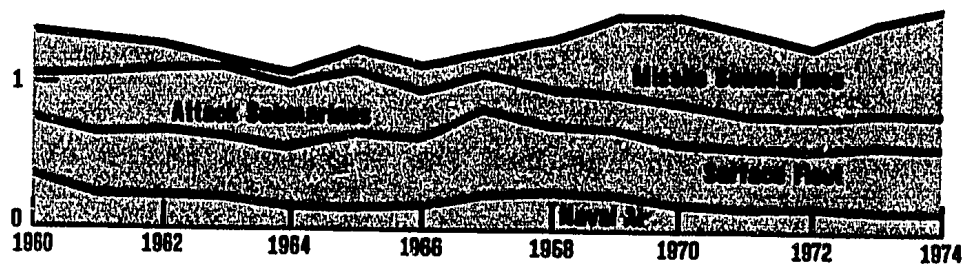
By Element

Billion 1970 Rubles
4 —



By Procurement Category

Billion 1970 Rubles
2 —



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butable to heavy outlays for ballistic missile submarines; total spending for other elements of the Soviet Navy has changed little since 1960.

From 1960 through 1974, spending for the surface fleet averaged more than 50 percent of total naval funding; for submarines about 35 percent, split almost equally between ballistic missile submarines and other submarines; and for naval aviation 15 percent. Spending for procurement shows a different distribution: construction of new submarines accounted for about 45 percent, surface ships more than 30 percent, and naval aircraft a little less than 15 percent. The remaining 10 percent was devoted to coastal defense and support activities. Over the last five years the share devoted to purchases of new submarines has been even greater--about 52 percent.

The large outlays for new submarines reflect three different naval objectives for the period: to build a fleet of cruise missile submarines to counter US aircraft carriers, to acquire torpedo attack submarines for antiship and ASW missions, and to deploy a ballistic missile submarine fleet. Since the early sixties the Soviets have developed more than 10 classes of cruise missile and torpedo attack submarines. The heaviest outlays were made between 1960 and 1965 when the USSR procured large numbers of E, F, and N class units. Since 1968, the Soviets have concentrated their resources on the Y and D class SSBNs, which together account for more than one-third of Soviet naval procurement and have driven naval spending to all-time highs.

Spending for new surface ships, cut in the early sixties by Khrushchev, rose sharply in the mid-sixties, when the Soviets undertook a number of costly programs, including several classes of cruisers and destroyers and the Moskva helicopter carrier. Despite the current emphasis on submarine programs, spending for surface ships remains substantial.

Naval Aviation has had the smallest share of naval funding. Procurements of the principal naval air systems, the TU-95 Bear D, TU-22 Blinder, and

TU-16 Badger aircraft, were largely completed during the sixties. Over the last five years Naval Aviation has received less than 10 percent of navy procurement funds.

Air Defense Forces

Spending for the Air Defense Forces (PVO Strany) has been marked by cyclical swings and is presently at a level some 13 percent lower than in 1960. After falling in the early sixties, outlays rose rapidly from 1964 through 1969. Annual spending has dropped every year since then. Although about 40 percent of the expenditures go for pay and operating costs, annual outlays are heavily influenced by investment programs. Annual spending during the period was driven by the procurement levels of surface-to-air missiles and interceptor aircraft. Deployment of less costly components of the Air Defense Forces--control and warning facilities, an antiballistic missile system, and an antisatellite system--tended to follow a more regular spending path and had little impact on the overall configuration of air defense spending.

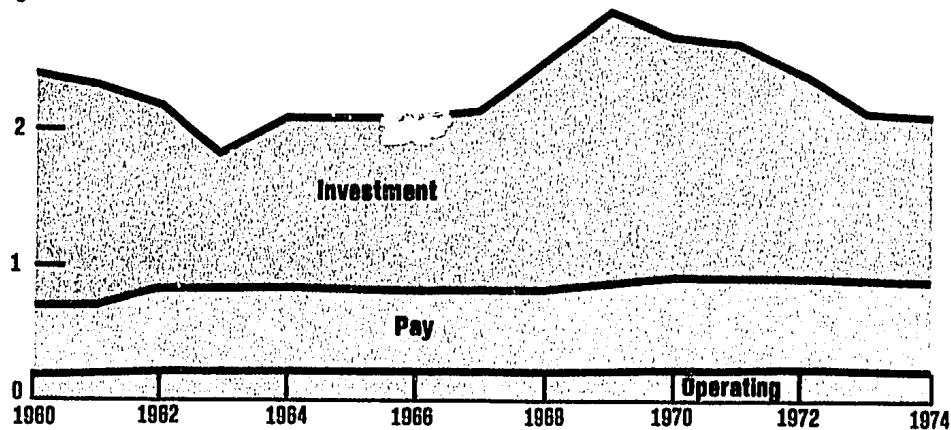
The high level of expenditures in the early sixties reflected the nationwide deployment of the SA-2 missile system. During the mid-sixties expenditures were fairly stable. The YAK-28P Firebar interceptor was the only major program, absorbing nearly half of all PVO outlays in 1964, and the SA-2 and initial SA-3 deployment programs were drawing to a close. By 1968, the introduction of a new generation of air defense systems, such as the SA-5 SAM system and the SU-15 Flagon and TU-128 Fiddler interceptors, resulted in a surge in spending. The peak of air defense spending was reached in 1969 and it has declined steadily since then despite continued heavy outlays for the MIG-25 Foxbat interceptor. Since then, expenditures for the deployment of new weapons have declined sharply as earlier programs have been completed, and replacements have not yet appeared.

Keeping the Soviet air defense system operating is a costly business. Operating outlays and pay and allowances have totaled almost one billion rubles

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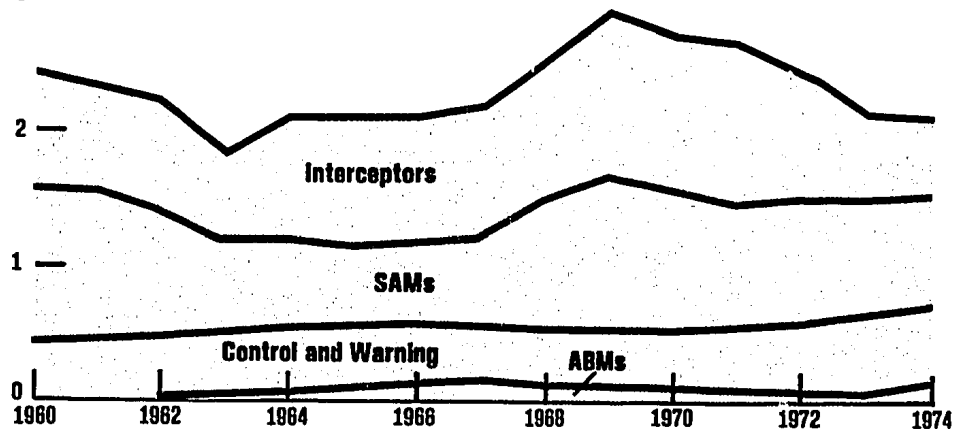
Estimated Soviet Expenditures for the Air Defense Forces By Resource Category

Billion 1970 Rubles
3 —



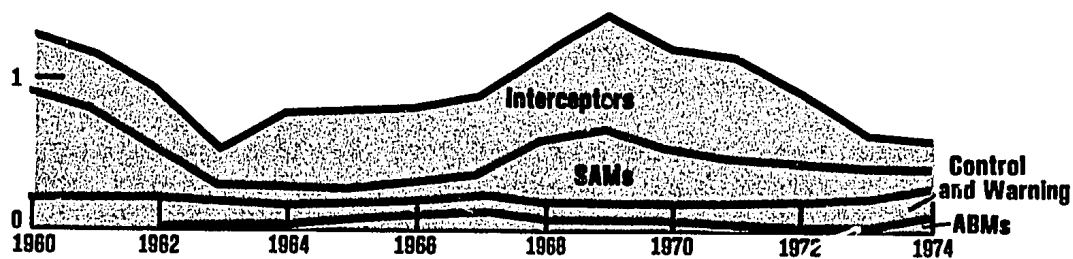
By Element

Billion 1970 Rubles
3 —



By Procurement Category

Billion 1970 Rubles
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annually since 1970. In addition, expenditures for spare parts have grown rapidly and in 1974 are some 2½ times as large as in 1950, reflecting the size of the massive air defense network--some 9,600 SAM launchers, about 1,100 radar sites, and 2,700 interceptor aircraft.

Strategic Rocket Forces

Annual spending for the Strategic Rocket Forces has displayed a strong cyclical behavior, with far greater swings in annual outlays than observed for any other branch of service. The waves of procurement spending for successive generations of strategic missiles create this variation in SRF expenditures and give shape to the profile of total Soviet defense spending. Although R&D efforts for individual programs cannot be quantified, there is little doubt that during the periods between strategic weapon procurement programs, the USSR is investing heavily in R&D for new missiles.

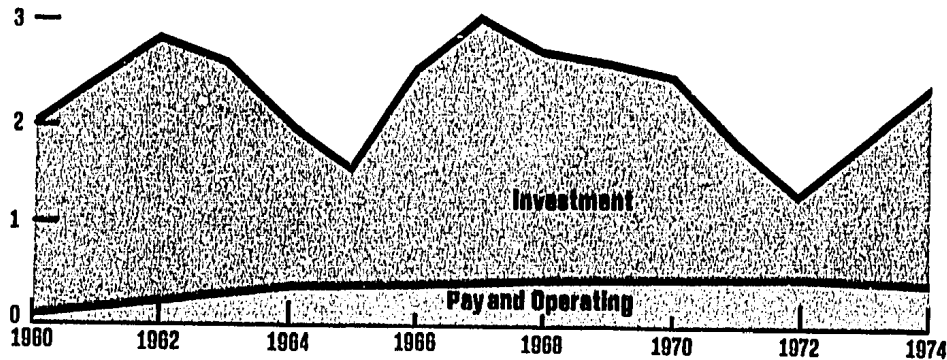
During the sixties the SRF went through two cycles. Expenditures reached an early peak when the USSR was deploying the SS-4 Mk3M, the SS-7 ICBM and, on a smaller scale, the SS-5 IRBM and the SS-8 ICBM. Spending then declined as these programs were completed. The late sixties saw a resurgence in spending when the SS-9, SS-11, and SS-13 programs were in full swing.

A third cycle began during the early seventies and is expected to last through about 1977. Around 1972 the USSR began flight testing four new ICBM systems, three with multiple independently targetable reentry vehicles (MIRVs). After reaching an all-time low in 1972, SRF procurement spending grew rapidly as the USSR began acquisition of the SS-11 Mod 3 MRV. In addition, the initial procurement phases of the other new ICBM systems began to impact on spending. SRF outlays are projected to climb rapidly over the next two years or so.

Investment spending for the two cycles in the sixties peaked at about 2.6 billion rubles. Peak investment outlays for the present cycle probably will be considerably higher, principally because of

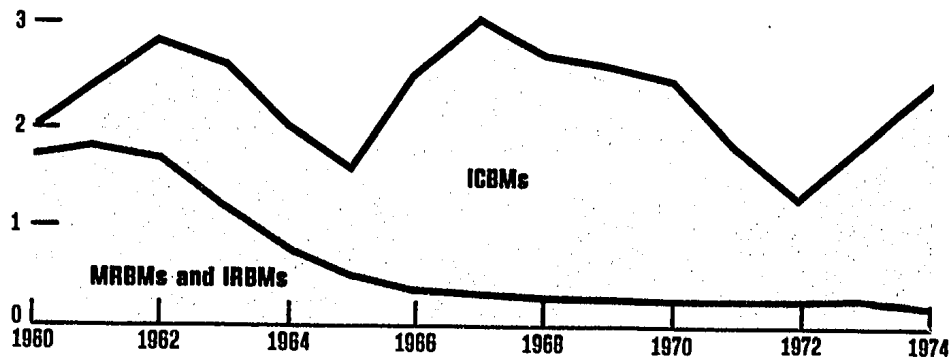
Estimated Soviet Expenditures for the Strategic Rocket Forces
By Resource Category

Billion 1970 Rubles
4 —



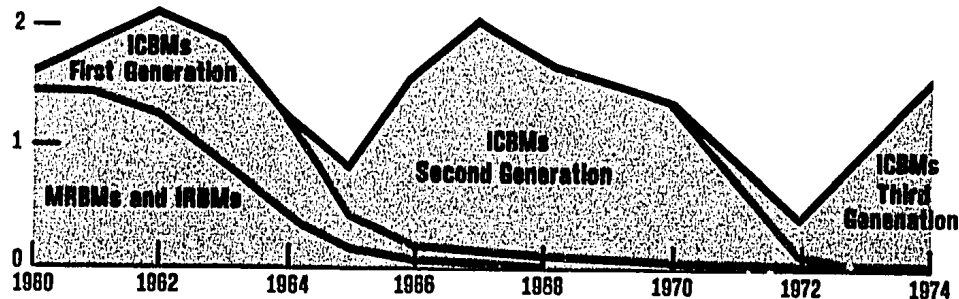
By Element

Billion 1970 Rubles
4 —



By Procurement Category

Billion 1970 Rubles



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the expensive new MIRV warhead systems. Pay and general operating costs in the SRF, already the lowest of all the service branches, have been declining slowly since 1972, and further decreases will occur when the Soviets begin phasing out the older strategic systems deployed in a soft mode. These weapons require large numbers of men to maintain them, hence they are relatively expensive to operate.

Air Forces

Spending for the Soviet Air Forces also has fluctuated--with aircraft procurement cycles--but has not been as volatile as the outlays for the Strategic Rocket Forces. From 1960 through 1964, air force spending rose slightly, from about 3.1 to about 3.4 billion rubles, as the Soviets invested heavily in transport aircraft and fighters. Over the next five years spending fell by more than 25 percent. Since 1969 air force expenditures have grown nearly 50 percent to an all-time high of 3.7 billion rubles in 1974. Virtually all of the variation stemmed from changes in investment outlays; pay and operating expenditures changed little over the period.

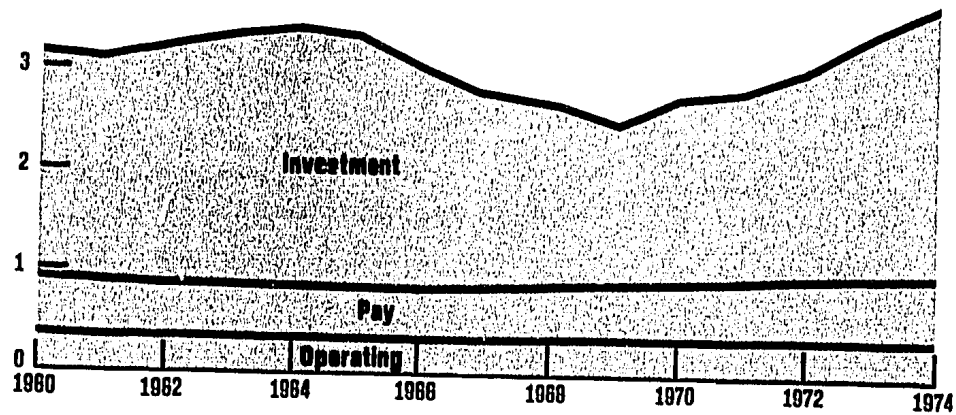
The three elements of the Soviet Air Forces are Long-Range Aviation, Frontal (tactical) Aviation, and Military Transport Aviation. From 1960 through 1974 Frontal Aviation took about 40 percent of estimated outlays for the Air Forces, and Long-Range Aviation and Military Transport Aviation about 30 percent each. The present division, however, is markedly different from the long-run average. The share taken by Long-Range Aviation has been declining steadily since about 1965, when several major bomber programs were nearing completion, and now amounts to about 20 percent of the total.

There has also been a shift in Frontal Aviation spending. Throughout the sixties, Frontal Aviation introduced SU-7 Fitters, MIG-21 Fishbeds, and YAK-28 Brewers into the force in large numbers; but spending remained about the same share of the total. Since 1970, continuation of these programs and the introduction of advanced aircraft such as MIG-25 Foxbat,

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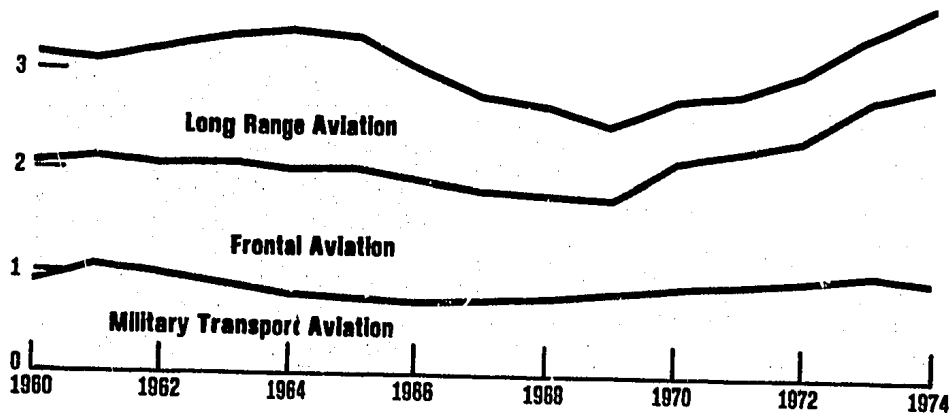
Estimated Soviet Expenditures for the Air Forces By Resource Category

Billion 1970 Rubles
4 —



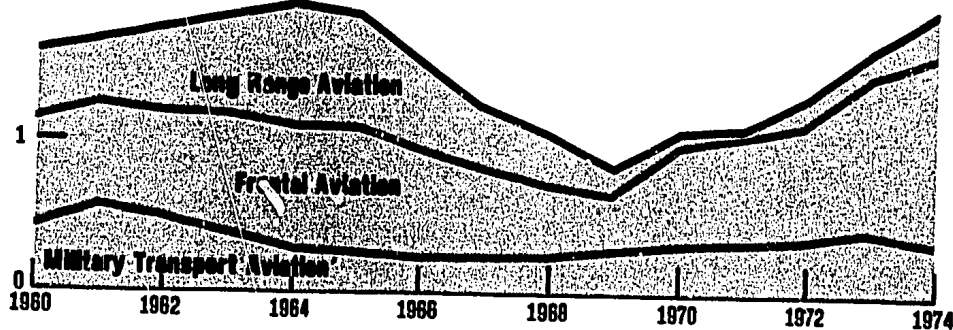
By Element

Billion 1970 Rubles
4 —



By Procurement Category

Billion 1970 Rubles
2 —



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MIG-23 Flogger, and SU-19 Fencer have caused Frontal Aviation outlays to grow rapidly. Procurement expenditures in 1974 were more than triple those of 1969. Thus, Frontal Aviation has driven up air force spending as a whole, absorbing about half the total since 1970.

Command and Support

In addition to the costs of the rear services component of each branch of service, this aggregation contains expenditures which cannot be distributed among the five combat branches because of insufficient information. Encompassed are expenditures for a variety of command and support functions and for military space operations. Retired pay and reservists' rations while on active duty are funded by the Ministry of Defense and are also treated under this account.

The sum of all these expenditures has been relatively large and has increased almost 90 percent since 1960, to about 3.1 billion rubles in 1974. Most of the increase occurred prior to 1968 as a result of the rising activity and costs associated with satellite reconnaissance programs. Since 1969 there has been only a 6 percent increase in the level of spending.

Comparison of Service Budgets

Total Spending

Spending for military forces averaged about 17 billion rubles a year over the 1960-1974 period. The Ground Forces received the greatest share, some 25 percent, and the Air Forces about 18 percent. The remaining funds were distributed about equally among the other three combat branches and the command and support services. (See chart, next page.)

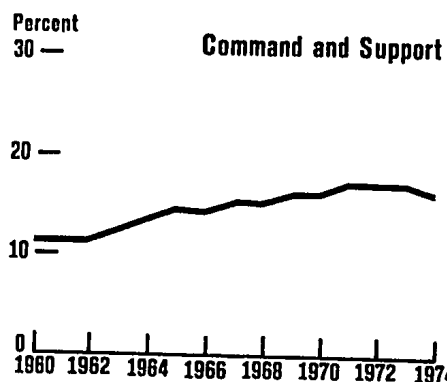
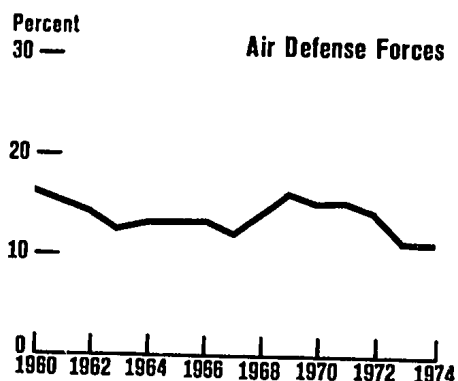
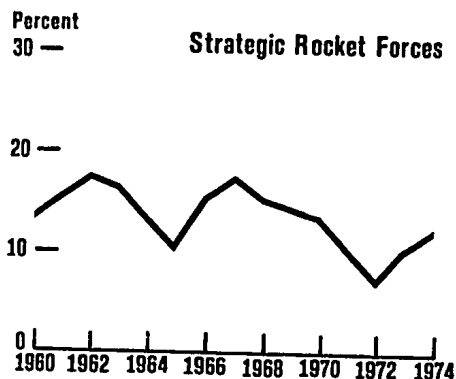
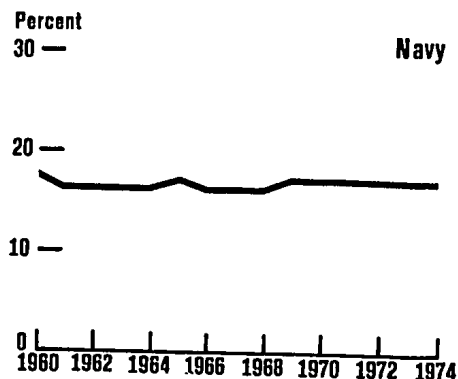
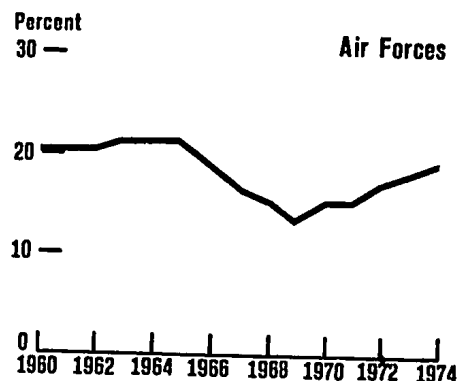
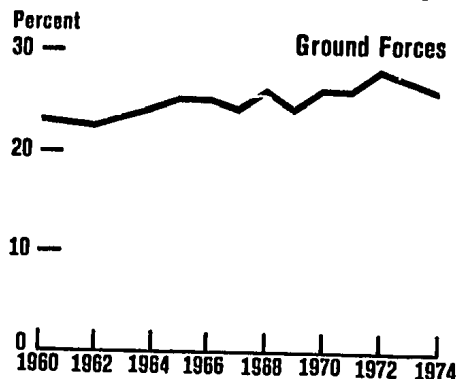
The distribution by branch of service shows substantial variation from year to year over the period. In terms of shares of total appropriations for the forces, the Navy and the Ground Forces

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Distribution of Soviet Expenditures for Military Forces by Branch of Service

Percent of Total Forces Spending



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exhibited the most stability. The Air Forces' share declined between 1965 and 1969, but has grown steadily since then. The Air Defense Forces' share, although less subject to radical change, showed inverse periods of growth and decline, with a generally downward turn since 1969. The share of the Strategic Rocket Forces showed the widest variation. For example, in 1972 its share of the total was only 7 percent, about half its historical share since 1960. Since then, however, the share absorbed by the SRF has returned to its historical average and is still climbing.

Spending by Resource Category

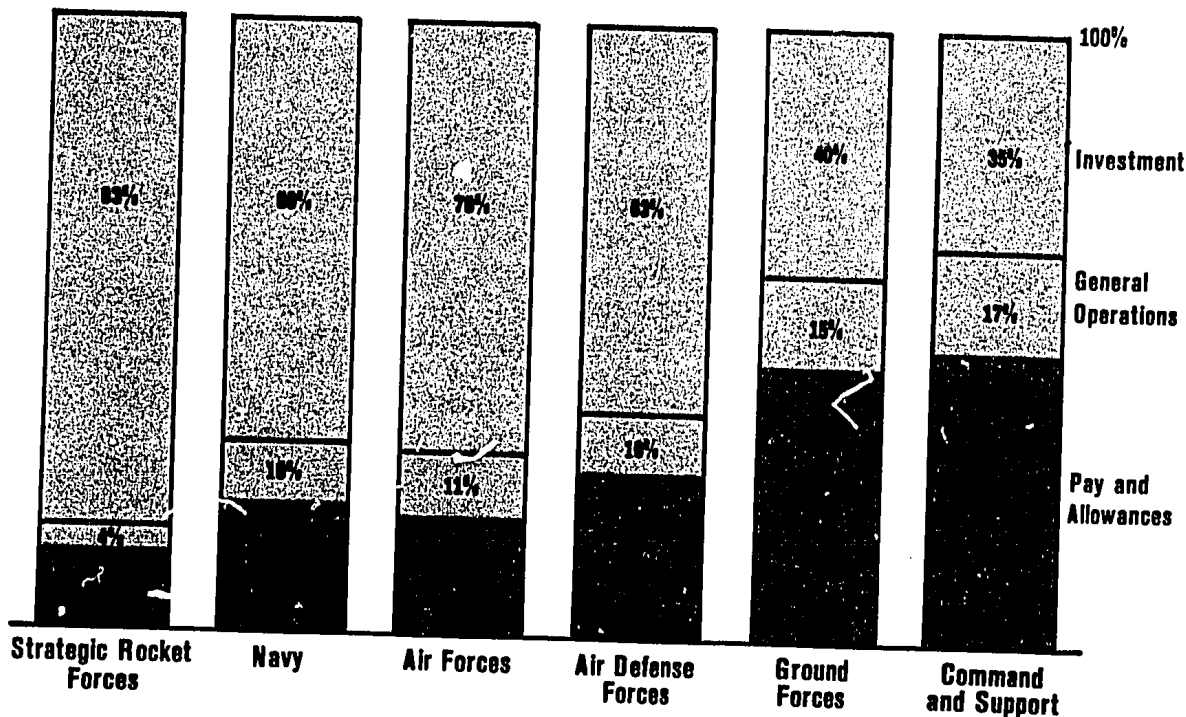
Comparison of the structure of spending by resource category in the individual branches of service reveals widely differing profiles. Military and civilian pay accounted for a large portion of the budgets of the Ground Forces and, to a lesser extent, the Air Defense Forces. That part of investment devoted to procurement of spare parts absorbed a larger share of outlays for the Air Defense Forces and Air Forces than for the other services. The general operations segment was substantially smaller for the Strategic Rocket Forces than for all other services (see chart, next page).

Investment includes procurement of armaments and equipment, purchases of spare parts, and construction and repair of facilities. Within this category, the behavior and composition of spending for procurement of armaments and equipment and for construction are the most important components because they reflect the flow of new equipment and technology into the forces. Here the Strategic Rocket Forces clearly stand out. SRF procurement outlays for these items accounted for about 22 percent of the total for Soviet forces over the 1960-1974 period and almost 75 percent of total SRF expenditures. Purchases by the Navy and Air Defense Forces of armaments and facilities each claimed more than 20 percent of the total and accounted for about half of total outlays for both services since 1960.

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**Resource Structure of Soviet Expenditures for
Each Branch of Service, 1960-1974**



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As noted above, procurement of armament and equipment and construction of facilities is the source of most year-to-year variation in spending for forces. Comparisons of estimated annual investment outlays by branch of service indicate that service procurement over time was either quite stable or exhibited wide fluctuations (see chart, page 40). The Ground Forces and Navy, for example, have demonstrated relative stability in procurement spending, with annual variations rarely exceeding 10 percent. On two occasions procurement for the Navy grew more rapidly, but each growth spurt followed several years of decline and probably was a result of program phasing.*

In contrast, procurement expenditures for the Air Forces, Air Defense Forces, and Strategic Rocket Forces have been highly variable. The pattern of procurement for the Frontal Aviation arm of the Soviet Air Forces and the interceptor arm of the Air Defense Forces (APV0) has been countercyclical; when procurement for one of the two has risen, procurement for the other has fallen. This is because both services compete for the same product--tactical airplanes.

Procurement spending for the Strategic Rocket Forces also exhibits a high degree of cyclicity. In fact, it is the SRF weapon purchases that have given the shape to the trend line for overall spending for the forces. The volatility of SRF procurement results from the fact that these forces are comprised of a few very costly systems which are procured over a relatively short period.

Spending for Military RDT&E

As already noted, military RDT&E programs are financed primarily through the science portion of the state budget. Financing through the state budget

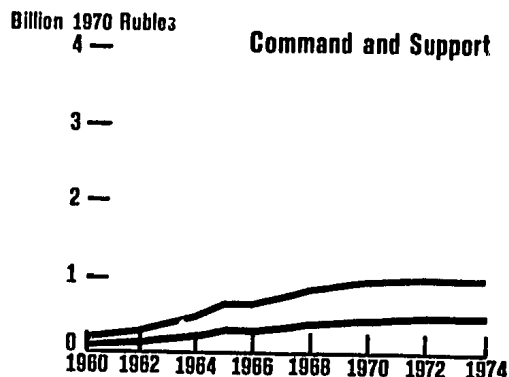
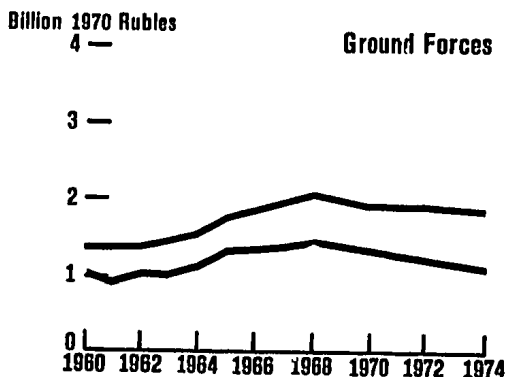
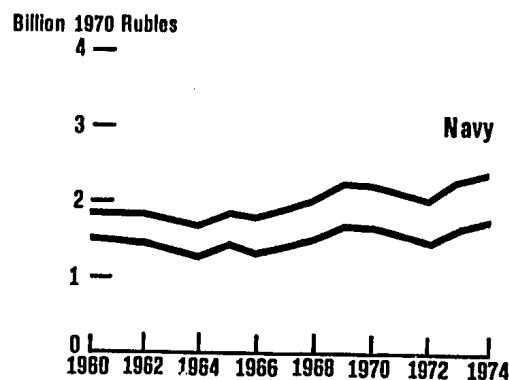
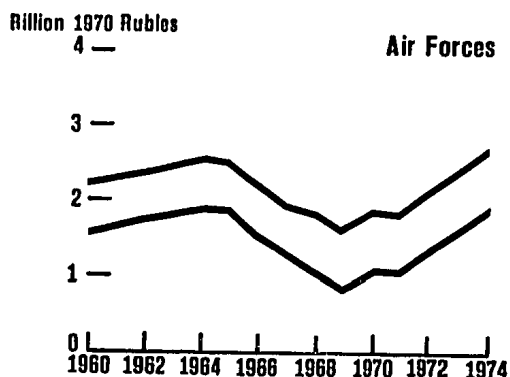
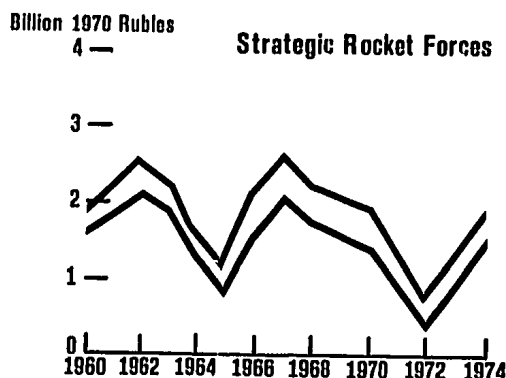
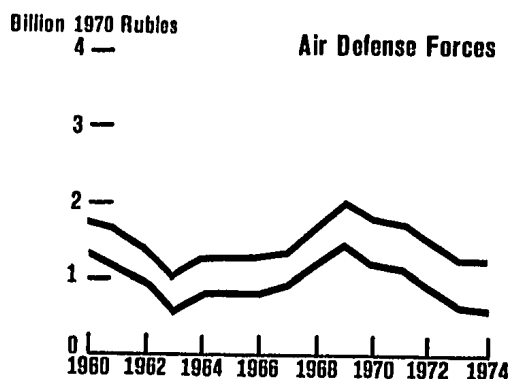
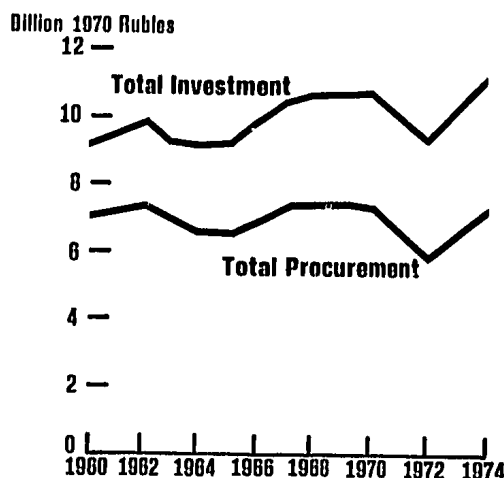
* Procurements for command and support services have been relatively stable over the last seven years or so, but because the data in this category conceptually include elements from each service branch, the trend has less significance than for the combat arms.

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Estimated Soviet Investment and Procurement Expenditures by Branch of Service

— Investment
— Procurement



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permits tighter centralized control over the multi-billion ruble programs associated with development of new weapon systems.

Military RDT&E spending largely determines the quality and shape of future forces. As indicated by the expenditure trends, military RDT&E costs have tended to increase significantly as a proportion of total weapons acquisition costs, reflecting the growing complexity of Soviet weapons. Military R&D programs require first rate scientific minds, specialized skills and scarce materials, and advanced technology--all meeting rigorous quality specifications. Thus, the R&D effort probably has exerted more pressure than any other component of defense spending on the best and scarcest resources in the Soviet economy. The quest for complex advanced weapons by all the service branches probably has led to competing bids for resources among the chief research institutes and design bureaus.

Some degree of mobility exists among military R&D personnel, but the scene is still dominated by a handful of prestigious directors of major institutes and bureaus who were pioneers in missile development and related fields. These directors are allowed considerable discretion in the use of the resources entrusted to them, provided they produce results. Such resources are exploited to investigate new technologies and applications not necessarily related to specific weapon systems. Consequently, it is difficult to correlate military R&D expenditures with weapon system procurements.

Nevertheless, on the basis of observed programs and analogous US experience, some general conclusions may be drawn about military RDT&E spending among the various service branches. Advanced weapon systems such as the Soviets have been deploying in large numbers since 1960 incorporate high quality technology in electronics, propulsion, and nuclear armaments, and are the most costly to develop. These systems probably account for most of the increased expenditures noted over the past 15 years. The principal consumers of advanced technology are the Stra-

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tegic Rocket Forces and the Air Defense Forces. Although evidence is accumulating that ground force systems are becoming increasingly complex, the Ground Forces probably still have the least stake in advanced technology. Consequently, the share of expenditures related to RDT&E in these individual service branches would be disproportionate to their shares of total defense spending. The share of RDT&E expenditures in the other service branches--the Air Forces and the Navy--might be expected to approximate more nearly their share of total defense spending.

The development and deployment cycles of advanced weapon systems for the Strategic Rocket Forces, and to a lesser extent the Air Defense Forces and Air Forces, are characterized by long and expensive R&D programs before procurement begins. When a number of major systems are under development total procurement outlays tend to fall, but when development is completed procurement expenditures rise rapidly, accounting for the cyclical behavior of strategic spending. The data for 1973 and 1974 indicate that the Soviets are now in the midst of a sharp upward swing in procurement outlays for strategic systems.

The development-procurement cycle has less impact on the expenditures of the Ground Forces and the Navy. The large expenditures for pay and operating--averaging 60 percent over the entire 1960-1974 period--are a stabilizing factor in the Ground Forces budget. In addition, once development is completed the production programs for many items of ground force equipment have been long and slow paced, creating a more stable pattern of investment outlays. Similarly, naval vessels, although expensive, require long construction times.

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Resource Implications of Soviet Defense Spending

Exactly how the Soviet leaders evaluate the size of their overall defense effort in economic terms is difficult to determine. That its resource implications are of continuing concern may be gleaned from the few public utterances of high-level military and civilian leaders. They emphasize that they will do what is necessary to maintain the security of the USSR, but they often add that the effort entails sacrifices. On one occasion Brezhnev explicitly acknowledged that defense has restricted growth in the economy. He stated that socialism is strong, but "without our large defense expenditures we and our economy would move ahead far more quickly." Despite such occasional high-level allusions to the desirability of diverting military expenditures elsewhere--notably to the production of consumer goods--defense continues to enjoy a high priority in the allocation of resources.

When military spokesmen address defense costs, they express their sensitivity to the issue by citing the need for careful planning and elimination of waste. In deciding how to balance defense needs against other economic objectives, the leaders probably consider the state of the economy, some aggregate measures of the size of the defense effort, and the resource implications of specific defense programs. They apparently combine these factors to reach some subjective ideas about "the burden of defense."

State of the Economy

In periods of sluggish economic performance--generally related to bad crop years--the Soviet leaders must be strongly tempted to make at least marginal shifts in defense-related resources in the hope of putting the economy back on its planned course of development. But, in fact, while periods of poor economic performance may intensify the debate in the

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Politburo, the defense ministry is usually required to do little more than supply uniformed personnel and military vehicles to help save crops, or commit military construction units to assist on critical civilian investment projects.

More importantly, however, off years in economic growth are relatively few and far between, with the result that the overall sustained performance of the economy appears to obviate major sacrifices of defense objectives. Even in bad years the economy has been growing faster than defense spending.

Soviet industrial production, in particular, with its guaranteed domestic market, tends to keep rolling forward even in years of agricultural shortfall. Soviet industry is now about two-thirds the size of US industry and despite technological lags and artificial institutional restraints, it performs sufficiently well year after year to give Soviet leaders the assurance they need to pursue parity with the US in national defense.

Defense and Economic Aggregates

There is some evidence that the Soviets utilize economic aggregates to measure the magnitude and impact of defense. For example, a Soviet "think tank", the Institute of World Economy and International Relations (IMEMO), performs comparative analyses of the US and Soviet economies and within this frame assesses the respective proportions allocated to defense.

In an explicit use of economic aggregates in 1971, Premier Kosygin used the announced "defense budget" series to identify the portion of national income* allocated to defense during the previous five-year period. Although Kosygin did not note it, Soviet statistics show the "defense budget" has declined as a share of national income over time from 7.6 percent between 1961 and 1965 to about 5.7 percent in 1973. Measured according to the CIA estimates, total Soviet defense spending has declined as a share of national income from an average of 11.6 percent to roughly 8.2 percent during the same period.**

In terms of other national economic aggregates the Soviet defense effort takes less than 10 percent of the labor force, 10-15 percent of industrial production, and about 20-30 percent of

* The definition of national income used in the Soviet Union is different from that used in the West. Soviet national income is calculated as the value of final material product less depreciation. It differs from the Western concept in that it does not include services except for their material content, but includes direct taxes (such as the turnover tax). To the extent that many services in the USSR are financed through the turnover tax, however, they are indirectly included in national income. As a result, Soviet national income, in the aggregate, is close to the total that would be obtained by applying the Western concept of net national product.

** CIA usually measures the share of defense spending in terms of Soviet gross national product (GNP), computed according to Western concepts and adjusted to a factor cost basis. The valuation of Soviet GNP and its components at factor cost eliminates some of the distortions inherent in Soviet established prices, which are set by the government administratively and do not reflect accurately the value of the actual factors of production. Measured on a factor cost basis, spending for military programs amounted to about 6 to 8 percent of Soviet GNP in 1972. Spending for space programs made up an additional one-half percent of GNP in that year.

machinery output. Despite the large share taken by defense in some of these categories, defense expenditures continue to decline over time as a share of whatever economic aggregate is selected as a standard of comparison.

Assessing Individual Programs

The aggregate measures may be useful for describing gross trends, but the Soviet leaders probably decide military program issues on a case-by-case basis. Such decisions concern themselves primarily with the cost of a program in incremental resources. The size of the slice of the Soviet national income pie allocated to end users changes little because the bureaucratic structure of the Soviet economy is highly resistant to shifts in resources already in use. It is the tapping of available specific increments that is more critical.

The leaders may base specific resource decisions on the availability of manpower, steel, fuel, and the like. They may want to know the demands that a program will place on a critical industry such as computers or on other electronics components. Finally, Soviet leaders, like all executives who must make many decisions on the basis of incomplete data, probably rely to a large degree on previous experience and intuitive judgment in deciding the allocation of resources for defense.

Framing the Arguments

Those arguing against larger defense programs would point out that relating the impact of defense demands only to physical resources diverted from the economy does not take account of the qualitative factor of technology. In addition to preempting the finest scientific, engineering, and managerial talents of the economy, the defense effort draws heavily on the output of scarce and high-quality materials, components, and equipment. For example, the aerospace industry alone claims more than one-

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third of the advanced machine tools produced in the USSR. It also has a priority claim on high-grade and rare metals and alloys. In the case of electronics, defense takes a large share of computer output, absorbs nearly all integrated circuit production, and siphons off an estimated 60 percent of total production. These inputs would be useful in modernizing the civilian economy and reducing the disparity between the nondefense industrial technology of the West and that of the USSR.

Those opposing restrictions on the growth of defense resources would probably stress that defense is growing slower than the economy as a whole, and that it is declining as a share of most economic aggregates. Citing the more efficient operation of the defense sector, they might question the efficacy of shifting some of its resources elsewhere. Removed from the high performance demands of defense production, such resources might well be exploited less efficiently in other manufacturing enterprises. Proponents of defense outlays would also argue that if Soviet defense industries are to continue to supply products that are competitive with the West, the flow of quality resources to that sector must be undiminished.

Resolving the Conflicts

To date, the resolution of these conflicting arguments has apparently been consistently in favor of steadily increasing military spending. In the absence of convincing testimony on leadership perceptions of the economic implications of defense financing, the views of the men who decide defense allocations must be inferred from their actions. In general, the leadership has not acted as though the sacrifices made necessary by defense programs had a major influence on their decisions. Defense programs have been well funded, and the followthrough on new military programs has been strong even in the face of economic setbacks such as the agricultural and chemical industry crisis of the early sixties and the poor crops of 1972, and in spite of the mani-

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fest failure to meet a number of key goals of the Ninth Five-Year Plan (1971-1975).

Thus, while it is likely that at least some of the Soviet leaders see the burden of defense increasing in certain key areas and are troubled that the longer range goals of economic competition with capitalism are suffering as a result, there is little evidence that the leadership as a whole finds this unacceptable or would forgo, for purely economic reasons, military programs considered to be important.

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Outlook

The course of Soviet defense spending during the next few years is well defined by programs that are already under way. Modernization of the strategic missile force, continuing deployment of new submarine-ballistic missile systems, and the introduction of new aircraft are some of the major programs that will cause sizable increases in Soviet defense spending over the next several years. Expenditures for military RDT&E are also expected to continue their upward trend, although the rate of growth is expected to diminish for several years. Institutional forces inherent in the Soviet military and defense industries will support these programs and probably preclude any sharp reductions in defense outlays. Moreover, the economy is capable of sustaining--or even accelerating--the rate of growth in military spending if the leaders are willing to pay the price in terms of other objectives.

The levels of future spending probably will be little affected in the short run by positive developments in either the strategic arms limitation negotiations or the discussions on mutual force reductions. Even if these dialogues result in agreements for stabilizing or reducing force levels, military efforts are likely to be redirected toward qualitative improvements. Such agreements would, in fact, provide a strong incentive to maintain a vigorous research and development effort. In the long run, however, the conclusion of arms-limiting pacts could greatly reduce the pressure for expanding military expenditures.

While averaging about 3 percent per year, the long-term upward growth trend of Soviet defense spending has been marked by three well-defined cycles. These result almost entirely from the large procurement costs incurred in the deployment phases of succeeding generations of strategic systems. The expansionary phase of the latest cycle began in 1973 as the USSR undertook a new round of procurement of ICBMs. The rates of growth in military spending which have accompanied this cycle are higher than for any comparable period in the past. The general pattern during the current phase is consistent with past cycles, however, and spending probably will level off at a new higher plateau in 1976-1977 as the new wave of deployment of ICBMs approaches completion. If the past pattern of Soviet defense programing repeats itself, the level of spending should turn up again by the end of the decade with the beginning of another round of strategic force modernization.

Ground Forces. Spending for the Ground Forces, which has been growing rapidly since 1970, is expected to level off after 1975 at about 5 billion rubles a year. The buildup in manpower, the principal cause of the recent increases in Ground Forces spending, is projected to be completed by about 1976. Procurement expenditures, which had declined steadily between 1968 and 1974, are expected to increase by some 10 percent over the next few years. Almost all of the increase will go to purchases of arms for land warfare.

Navy. Naval spending, which has been driven higher since 1972 by expanding outlays for SSBNs, is expected to reach a plateau in the latter seventies. Although sizable outlays for naval air systems are projected for late in the decade when the Navy acquires Backfire aircraft, they will be more than offset by the anticipated decline in expenditures on the SSBN fleet, once the Soviets reach the number of vessels permitted by the SAL agreement. Surface ship construction is expected to continue at about present levels for the rest of the decade. Spending for attack submarines probably will increase as the SSBN programs are completed.

Air Defense Forces. Spending for the Air Defense Forces, which has been declining since 1971, will continue to fall for the next few years unless the Soviets fill out the Moscow ABM system to 100 launchers. Deployment of the Foxbat interceptor and the SA-5 SAM system are nearly completed, and no new major deployment programs for strategic defense are anticipated until late in the decade. Without additional spending for ABM defenses, air defense procurement expenditures will fall to an all-time low, with the bulk going for warning and control radars.

Strategic Rocket Forces. Outlays for the Strategic Rocket Forces, which reached an all-time low in 1972 and then jumped 40 percent in 1973, are projected to grow an additional 30 percent between 1974 and 1976. The rapid deployment of the SS-11 Mod 3--the first phase of the USSR's ICBM modernization program--will be largely completed by early 1976, but expenditures

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related to the four new ICBMs will keep SRF outlays high for the remainder of the decade.

Air Forces. The sharp rise in spending for Air Forces since 1970 is projected to continue through 1975 with the procurement of large numbers of tactical aircraft and the Backfire bomber. MIG-25 Foxbat procurement is expected to be essentially completed by 1976, but acquisition of SU-19 Fencer and MIG-23 Flogger will keep outlays high, accounting for about 60 percent of all air force procurement through 1978. Savings in operating expenditures resulting from the projected retirement of large numbers of older aircraft will partially offset the increase in procurement spending.

Space and Military RDT&E. Military RDT&E spending is projected to grow slowly over the next few years during the period when the Soviets are making major procurements of strategic weapons. Higher growth rates for military RDT&E are likely to resume in the late seventies as the Soviets strive to keep pace technically with US weaponry. Little increase is anticipated in civil space expenditures in the long run, but the program may become increasingly oriented toward military uses of space.

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Appendix:

CIA Estimates of Defense SpendingThe Published Defense Budget

The USSR does not make public sufficient information on its military spending to permit estimates of the magnitude, composition, and pace of its defense effort. In contrast to the large amounts of civilian economic data that are released regularly by the Soviets, information on spending for military purposes is closely protected.

Only one statistic--the single-line entry for "defense" in the annual State Budget--is announced each year. Even its usefulness is limited, as the Soviets have never told us what activities the defense budget covers. Moreover, inasmuch as the trend of the defense budget does not fit the behavior of Soviet military activities over time, there is a strong suspicion that its coverage, whatever it may be, is subject to unannounced changes in different years. To cite only the most recent example, the defense budget was virtually constant during 1970-1973 despite major changes in Soviet military procurement programs. Furthermore, the Soviets announced cuts in the budget for 1974 and 1975 in the face of major additions to their forces that must have generated an increase in spending.

The credibility of the defense budget is further denigrated by the Soviet practice, since 1963, of announcing identical figures for planned and actual spending. This practice follows earlier reporting of sometimes substantial differences between the two. For all of these reasons, we have come to treat the announced defense budget more as an indicator of the political image that the Soviets are trying to project--to their own people, to the United States, and to the world at large--than of the actual level of defense spending in the USSR.

If the announced defense budget were a reliable indicator of the overall level and trend of the Soviet

defense effort it would still have limited value. A single figure would not be useful in analyzing particular military programs, or in determining the potential impact on the Soviet economy of diverting resources from military to nonmilitary uses. Finally, it would provide no basis for translating Soviet defense expenditures in rubles into dollar equivalents for comparisons with US programs.

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Estimated Soviet Defense Expenditures by Branch of Service, 1960-1975
(Billions of 1970 Rubles)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	(1975)
Ground Forces	3.59	3.51	3.60	3.61	3.76	4.02	4.17	4.26	4.74	4.53	4.57	4.69	4.89	5.08	5.06	(5.16)
Naval Forces	2.61	2.57	2.58	2.53	2.48	2.68	2.62	2.77	2.88	3.11	3.11	3.04	2.94	3.18	3.30	(3.45)
Air Defense Forces	2.42	2.34	2.21	1.83	2.10	2.10	2.11	2.18	2.53	2.88	2.72	2.66	2.44	2.14	2.11	(2.14)
Air Forces	3.13	3.11	3.22	3.34	3.40	3.35	3.02	2.77	2.67	2.49	2.75	2.81	3.04	3.41	3.70	(4.04)
Strategic Rocket Forces	1.93	2.40	2.82	2.60	1.98	1.56	2.53	3.07	2.70	2.60	2.45	1.82	1.30	1.83	2.38	(2.89)
Command and Support	1.66	1.78	1.88	1.93	2.09	2.32	2.42	2.64	2.84	2.95	2.99	3.05	3.05	3.07	3.10	(3.12)
Total forces	15.35	15.70	16.30	15.84	15.82	16.02	16.88	17.69	18.37	18.57	18.60	18.08	17.67	18.72	19.66	(20.78)

Note: Because of rounding, components may not add to totals shown.

Estimated Soviet Defense Expenditures by Resource Category, 1960-1975
(Billions of 1970 Rubles)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Investment funds	9.19	9.45	9.84	9.21	9.07	9.14	9.85	10.46	10.70	10.86	10.71	9.97	9.34	10.19	11.09	(12.24)
Procurement of armaments and combat materiel	7.08	7.17	7.38	6.75	6.56	6.48	6.95	7.36	7.39	7.38	7.16	6.48	5.84	6.62	7.41	(8.45)
Procurement of spare parts	1.18	1.25	1.42	1.62	1.84	2.02	2.09	2.24	2.43	2.55	2.66	2.79	2.86	2.94	3.02	(3.08)
Construction	0.67	0.78	0.79	0.59	0.42	0.39	0.56	0.60	0.60	0.66	0.61	0.42	0.35	0.33	0.36	(0.40)
Facility repair	0.26	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.28	0.27	0.28	0.28	0.29	0.30	0.30	(0.31)
Operating funds	6.17	6.26	6.46	6.63	6.75	6.89	7.03	7.22	7.67	7.72	7.89	8.10	8.32	8.54	8.58	(8.54)
Military and civilian pay and allowances	4.44	4.57	4.73	4.85	4.95	5.07	5.18	5.33	5.64	5.70	5.83	5.98	6.14	6.31	6.34	(6.30)
General operating expenditures	1.73	1.69	1.73	1.78	1.80	1.82	1.85	1.89	2.03	2.02	2.06	2.12	2.18	2.23	2.24	(2.24)
Total forces	15.35	15.70	16.30	15.84	15.82	16.02	16.88	17.69	18.37	18.57	18.60	18.08	17.67	18.72	19.66	(20.78)
Military R&D	2.33	2.77	3.08	3.30	3.32	3.26	3.35	3.32	3.25	3.69	4.56	5.07	5.33	5.60	5.77	(5.88)
Total military	17.69	18.48	19.38	19.14	19.14	19.25	20.23	21.00	21.62	22.27	23.16	23.14	22.99	24.33	25.44	(26.66)
Space	0.33	0.37	0.54	0.95	1.57	2.01	2.33	2.70	3.04	2.87	2.64	2.66	2.69	2.46	2.08	(2.00)
Total defense	18.02	18.85	19.92	20.09	20.71	21.30	22.56	23.70	24.66	25.14	25.80	25.80	25.68	26.79	27.52	(28.66)

Note: Because of rounding, components may not add to totals shown.